XXIV.—Further Notes on Birds observed at Alix, Buffalo Lake, and Red Deer in the Province of Alberta, Canada, in 1915 and 1916. By CHARLES B. HORSBRUGH, Canadian Army Medical Corps, B.E.F.

THESE additional notes on the birds of Alix, Buffalo Lake, Red Deer, and other districts (vide 'Ibis,' 1915, pp. 670-689) are the result of my change of residence to Red Deer in October 1915, and better opportunity to extend my observations over a wider territory. During the early spring and summer of 1916 the weather was, as in the previous year, disagreeably wet, and snow fell early in November. Red Deer, which lies nearly halfway between Edmonton and Calgary, is as well-wooded, watered, and hilly as the Alix country, and offers a good field for ornithological study. It lies 2860 feet above sea-level. A Natural History Society has been in existence for a few years, the reports of which are published annually in the Journal of the Government Agricultural Society.

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The nomenclature and classification, as in the previous paper, are that of the A.O.U. Check-List.

Æchmophorus occidentalis. WESTERN GREBE. I visited the same colony reported in my notes for 1914 on 28 May, 1915, finding plenty of nests with full clutches and birds as numerous as in the previous season. I received a specimen picked up alive near Red Deer on 17 November, which died next day. Mr. P. A. Taverner, of the Victoria Memorial Museum, Ottawa, writes me as follows:—" One of the Western Grebe's skins is an interesting bird, being the form *clarkii*, originally described as an independent species but now regarded as a variant form of the Western. It is characterized by its smaller size, different coloration of lores and bill, and by having a recurved bill like the Avocet." My knowledge of this subspecies is insufficient to add anything to the above.

Gavia immer. GREAT NORTHERN DIVER. A single specimen was seen on a large lake a few miles south of Alix on 3 April,

1915. On 30 May I received a female, with ovaries greatly enlarged, which was shot close to the above village. Four birds were reported seen on Alix Lake on 14 August probably parents and young. On 3 September a single bird still remained.

Larus argentatus. HERRING-GULL. On 24 May, 1915, I saw a pair of these Gulls at Buffalo Lake, and on the 29th I shot an immature specimen. Whilst exploring an island near the lake's head, Mr. George Cook stated that in previous years Herring-Gulls formerly bred at its northern point, as well as Common Terns, but I found no signs of nesting, although a few birds of both species were in the neighbourhood.

Larus franklini. FRANKLIN'S GULL. On 21 April, 1915, I saw two, and eight on the 22nd, after which date they became common, but I think they had decreased in numbers compared with last season's observations. On 30 June, 1916, I visited Spotted Lake with the Rev. H. M. Holdom, to show him the gullery. We had a heavy thunderstorm, and head-winds made rowing very arduous work. We found many nests and young in down, and a remarkable number of Pied-billed Grebes' nests scattered thickly amongst the Gulls' nests. Four seemed to be the average clutch of the former species. The young gulls, when handled, vomited a mass of insects, identified as grasshoppers and dragonflies. I reared one bird, which is now in the Banff Zoo. On 19 July, 1916, I observed a small flock numbering about fifteen birds migrating south, high over the town of Red Deer.

Sterna hirundo. COMMON TERN. This species appeared to be more abundant than during the previous season in the Alix district.

Phalacrocorax auritus. DOUBLE - CRESTED CORMORANT. Mrs. Cassels called my attention to a single bird, probably of this species, flying over Sylvan Lake on 20 May, 1915. I have been informed that this Cormorant breeds on a lake near Edmonton, but I could not find if this was really the case.

Anas platyrhynchos. MALLARD. This was the first species of duck I found nesting this year (1915), picking up four eggs, probably destroyed by crows, in the large slough opposite my house, on 1 May.

MALLARD × PINTAIL. Although a hybrid of these two species in captivity is not a great rarity, I imagine that such a cross in a wild state must be very uncommon. A beautiful specimen was presented to me by a friend, who shot it near the town on 28 October, 1916. The characteristics of the Mallard and Pintail males are very evenly divided, and the bird was in prime condition. Dissection as well as external details proved it to be a male. Weight 2 lb. 13 oz. Length $24\frac{1}{2}$ inches. Wing-joint to longest primary $11\frac{1}{2}$ inches. Eye brown. Legs dull creamy buff, too small for an ordinary Mallard. Bill dusky black along centre, slate on sides.

Mareca americana. AMERICAN WIDGEON. I did not discover eggs of this bird during last season, but was fortunate to do so on 3 May, 1915, when visiting the north end of Buffalo Lake. The nest contained nine eggs, quite fresh.

Dafila acuta. PINTAIL. I found two Pintails' nests of eight eggs each, with a plentiful supply of down—the first in a small patch of bush close to the Mirror trail on 24 May, 1915, and the other on the same date at Buffalo Lake. This latter was situated on a small rise close to a shallow pond, which the male bird seemed loath to leave. 13 April is my earliest record for their appearance in 1916.

Marila valisineria. CANVASBACK. I secured a fine male near my house with my '22 rifle on 21 April, and at the present date of writing (15 January, 1916) have a pair alive in my cellar at Red Deer, together with a male Pochard. The nest from which these specimens came was looted by crows. The majority of the nests I met with this season held Pochards' eggs mixed with those of the rightful owners. The female Canvasback was presented to the Zoo at Banff ; the males of both the above species unfortunately died.

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Clangula clangula americana. AMERICAN GOLDEN-EYE. I flushed a male Golden-eye from a small stream on 1 April, 1915, whilst riding into Alix; and on 30 June, when punting towards the Spotted Lake gullery, the Rev. H. M. Holdom and I saw a female with four downy youngsters swimming in the creek. This species Cook and I observed in numbers at Buffalo Lake during the month of June.

Charitonetta albeola. BUFFLE-HEAD. I saw a single male on 10 April near my house, but beyond an empty nest in the usual situation I did not succeed in finding any eggs, although several young broods were observed.

Oidemia deglandi. WHITE-WINGED SCOTER. My efforts to shoot a specimen were futile, as the species unless killed outright can dive and stay submerged like a turtle. Mr. James Brindle, however, brought me a fine male, shot at Buffalo Lake on 19 June, 1915, where they were to be found in hundreds. By 15 August the Lake seemed to be almost deserted.

Erismatura jamaicensis. RUDDY DUCK. The Ruddy Duck appeared to be more abundant at Buffalo Lake and neighbourhood than in the previous season.

Chen hyperboreus nivalis. GREATER SNOW-GOOSE. I saw two specimens shot near the town on 4 November, 1916. One was immature. Length 27 inches.

Anser albifrons gambeli. WHITE-FRONTED GOOSE. At the local birdstuffer's shop I was shown a mounted specimen, obtained at Ponoka in October 1915.

Branta canadensis canadensis. CANADA GOOSE. On 17 March, 1915, a farmer near Alix showed me five Canada Geese which he kept as decoys, finding them most useful. He had discovered the nest in 1912, placed on a musk-rat house at Buffalo Lake. A number of these Geese appeared on the slough opposite my house on 1 April, and some would undoubtedly have bred there had not local gunners driven them away. The last pair remained till 1 May.

Ardea herodias herodias. GREAT BLUE HERON. Another farmer brought me a fine male specimen of the Great Blue Heron on 4 May, 1915, which he had shot at dusk, presumably for a Goose, near Alix. Length taped, 45 inches; wing spread, 70 inches. Gullet contained several large newts. An immature specimen was sent me on 30 May from south of Alix. I observed a single bird at Buffalo Lake on 15 August.

Grus mexicana. SANDHILL CRANE? I noticed a bird which I suspect to have been a Sandhill Crane flying over myhouse at Alix on 4 May, 1915, but it was too distant to determine the exact species.

Porzana carolina. SORA. Like my similar experience the previous year, I picked up a Sora, killed by the telegraphwires near Alix, on 29 July, 1915.

Steganopus tricolor. WILSON'S PHALAROPE. Opposite my house I saw several pairs of Wilson's Phalarope on the slough on 19 May, 1915, and after three days' careful hunting discovered a nest with four eggs close by. I flushed the male bird off the nest several times; it was joined on each occasion by its mate, and both became noisy but fairly tame. This species seemed rare the following year, as I only saw a single bird (female) at Buffalo Lake although I hunted diligently. I shot a male near Red Deer on 6 July, 1916, with plumage much worn. A female was also observed as she pursued the former round a large slough.

Recurvirostra americana. Avocer. Whilst travelling with Cook to his house at Buffalo Lake on 24 May, 1915, we found an Avocet's nest containing eight eggs. This was placed on a small sandy promontory jutting out into a large pond. On the edge of a lake near Bashaw, we discovered another nest with five eggs on 27 May. Cook has several times in past seasons found more than the average clutch in one nest.

Macrorhamphus griseus griseus. DOWITCHER. Cook brought me the skin of a Dowitcher shot at Buffalo Lake on 22 August, 1915. During the following season most of the Waders were scarce, and I have no further notes of this species, which I have not personally seen.

Pisobia minutilla. LEAST SANDFIPER. I saw about halfa-dozen near Brindle's house, Buffalo Lake, on 15 August, 1915, feeding in company with a few pairs of Killdeer and Greater and Lesser Yellow-legs.

Totanus melanoleucus. GREATER YELLOW-LEGS. I received a Greater Yellow-legs on 26 September, 1915, from Mr. W. Pettet, of Alix. Throughout the season, particularly during the earlier months, this species was fairly frequently observed and occasionally the Yellow-legs (*Totanus flavipes*) was met with both in the vicinity of the village and Buffalo Lake.

Catoptrophorus semipalmatus semipalmatus. WESTERN WILLET. This species yearly frequents Buffalo Lake and its neighbourhood in small numbers, and I saw two pairs on 25 May, 1915. On the 30th of the same month, whilst driving to his home with Cook, we noticed a Crow flying over a grassy meadow near the lake closely pursued by a Willet. We at once proceeded to search for a nest, and wasted almost an hour before I accidentally discovered it. The female had placed it close to a whitened (shoulder-blade) bone of a buffalo, and but for this error my eye would not have been led to the spot. So close did she sit that, after calling up Cook, the bird actually allowed me to lift her off her four beautiful eggs. Cook informed me that for many years he had sought the eggs of this species, but had never experienced my luck. We let the poor bird escape, after photographing the nesting-site.

Bartramia longicauda. UPLAND PLOVER. I noticed a pair of Upland Plover near Cook's house, on the ploughed lands, on 27 May, 1915. Numenius hudsonicus. HUDSONIAN CURLEW. These birds are by no means numerous, and I saw but one pair at Buffalo Lake on 25 May, 1915.

Charadrius dominicus dominicus. GOLDEN PLOVER. On 11 October, 1916, Cook sent me two specimens from Buffalo Lake, but they were immature and a bit too badly shot to accurately determine the sex.

Oxyechus vociferus vociferus. KILLDEER. One of the commonest of the Plovers in this part of the Province. Between Cook's house and Mirror we found a Killdeer's nest on 5 June, 1915, containing one egg, placed at the edge of the trail. I also found one well-grown young, still in down, at the head of Buffalo Lake on 1 June. A few pairs frequented Alix Lake.

Tympanuchus americanus. PRAIRIE CHICKEN. Cook kindly gave me the skin of a female shot at Buffalo Lake on 26 December, 1914. It was the only specimen he had ever observed.

Pedicecetes phasianellus campestris. PRAIRIE SHARP-TAILED GROUSE. Owing to the very wet months of early spring, Prairie "Chicken" and Ruffed Grouse were not as plentiful as last year. Close to the spot where Cook and I discovered a Killdeer's nest, I dismounted from the "democrat" to shoot a hare. Several shots failed to obtain the animal, and as I stepped off the bank bordering the road I trod on a Prairie Sharp-tailed Grouse. She had been sitting, all the while I was moving noisily around, on her nest of thirteen eggs, and kept close by until we drove away. This was on 5 June, 1915.

Circus hudsonius. MARSH-HAWK. One specimen scen near the town on 19 April, 1916. It is not particularly common in this locality.

Accipiter velox. SHARP-SHINNED HAWK. Almost within a stone's throw of my house I found a nest of the Sharpshinned Hawk, built in the branches of a willow on the edge of a small wood. It held three handsome eggs, which I took on 18 June, 1915. The structure was not bulky, and was placed about twelve feet above the ground. On 31 July, 1916, I shot an immature specimen on the same spot where I hunted for a nest in May but without success, close to the town (Red Deer). I saw others in the woods near my house on 5 August, all very noisy though not shy. I witnessed one stoop at a Kingfisher, which it hustled along for a short distance.

Astur atricapillus atricapillus. GOSHAWK. Mr. T. Pinnell, of Alix, presented me with an immature male shot on his farm on 27 February, 1915; and I saw two Goshawks close to Red Deer on 7 November, and a pair on 19 December near my house. This species seems fairly common. I received five of these birds between September and November 1916, one being an immature of the same season's hatching.

Buteo borealis calurus. RED-TAILED HAWK. Close to the village of Tees, I noticed on 23 March, 1915, several large Hawks. My notes for 17 April state "Hawks numerous "evidently returning with spring, and probably of the above species. On 29 April I found a nest being built near Mirror; and the pair of birds which nested close to the house last year built again in the same wood, but the tree was too difficult to climb. I secured a fine (male), melanistic phase of this Hawk near Alix on 8 October, 1914; also another male of the light variety on 13 October, 1914. The first Hawk of this species appeared on 5 April, 1916, flying over the town, and eight more on the 15th circling high. I found a nest on the 19th in a balm-tree (Balsamia balsamifera), about 30 feet from the ground, holding a clutch of three well-marked eggs. I collected these on the 26th. During a brief visit to Dried Meat Lake, near Camrose, I found another nest on 19 May with two pale eggs in a slender poplar tree growing at the edge of some uncleared land, and it was built about 12 feet from the ground. A large sheet of 'The Edmonton Journal' had been fixed into the structure and was very conspicuous at a considerable

distance. I found this nest on 20 May. Red-tailed Hawks seem to be the commonest species almost everywhere.

Archibuteo lagopus sancti-johannis. ROUGH-LEGGED HAWK. A resident brought me an immature female Rough-legged Hawk, which was found sitting on a fence-pole near Red Deer; being injured, it was easily captured. The crop was empty. In the local taxidermist's shop I saw another specimen lately obtained in this district. I flushed a young bird in the woods close to the town on 6 September, 1916, and saw another, also immature, living in a saloon in the town, which had been picked up slightly injured.

Buteo swainsoni. SWAINSON'S HAWK. I secured a male Swainson's Hawk on 24 May, 1915, at Buffalo Lake, and another on 16 August, with my rifle, near the same locality. I have a female mounted specimen in the dark phase shot near Alix on 12 September, 1914.

Haliaëtus leucocephalus alascanus. BALD-HEADED EAGLE. One or two reports reached me of Bald-headed Eagles being seen during the spring near Alix, but I could not personally verify them. Whilst visiting Banff, in May, I saw in the Zoological Gardens a magnificent specimen, which I believe had been in captivity for a number of years. Probably before the well-wooded shores of Sylvan Lake became a summer resort for the inhabitants of Red Deer and other towns, the Bald Eagle and Osprey nested undisturbed. Nowadays the latter has long ceased to do so; but the former still remains, though I was disgusted to find on 16 June that the tree holding a huge nest had been wantonly felled. A pair of these grand birds were seen over the lake on 17 June, and I hope they may have nested in safety, as I have friends at the lake who would do much to protect them.

Aquila chrysaëtos. GOLDEN EAGLE. I received in the flesh on 17 November, 1915, a splendid female specimen of the Golden Eagle, shot near Prairie Creek. Its crop and stomach contained a partly digested hare. The feet were of

a bright lemon-yellow, and the bird was in excellent condition. Two younger specimens were brought me alive on 30 November and 2 December respectively-one from Pine Lake district and the other closer to the town. The latter was caught in an unbaited trap set on top of a haystack. On 10 January, 1916, I received in the flesh a fine bird weighing 12 lb., shot near Red Deer. A second one was brought me on the 19th, which was secured also near the town, in an unbaited covote trap placed on top of a haystack. Judging from reports received from different parts of the surrounding country, Eagles, particularly this species, appear to be plentiful, and the taxidermist here told me he had refused many. My specimens were not fully adult, and I found it impossible to ascertain the sex by dissection, which has greatly puzzled me. No doubt the severity of the winter had driven these birds down from the mountains, and it is a great pity so many should have been ruthlessly destroyed. Hares filled the crops of those I preserved. An immature specimen, shot some miles north of the town, was brought me by a neighbour who shot it from off a telegraph-pole. The bullet damaged its interior anatomy so much that I could not discover its sex with certainty.

Falco rusticolus rusticolus. GREY GYR-FALCON. I received from my friend, Mr. A. Tomlinson of Calgary, during October, a fine specimen of the Grey Gyr-Falcon obtained last year at Camrose in October. At a taxidermist's shop in the town I saw another and similar specimen collected about the same date.

Falco sparverius sparverius. SPARROW-HAWK. I expected to observe this migrant earlier than the date recorded in my notes—19 April—when one was seen near my house. On 6 May a pair had a nest in a hole in a balsam-tree (*Populus* balsamifera) whose top had fallen off, but the tree was unclimable. On 2 June another pair occupied an old nestinghole of the Flicker, within half a mile of the former. I received a single egg taken in the vicinity of the town on 9 June. A nest at Buffalo Lake held four young on 20 June (Cook).

Pandion haliaëtus carolinensis. OSPREY. A pair was reported to have been seen at Pine Lake, about twenty-five miles south-west of the town, 26 April, 1915, where they used to nest some years ago.

Asio wilsonianus. LONG-EARED OWL. Cook and I found a Long-eared Owl's nest with four newly hatched young, near Buffalo Lake, on 29 May, 1915. In the same wood in which I found the Sharp-shinned Hawk's nest, I also flushed a Long-eared Owl from her nest, which held four eggs, on 23 June. I was shown a nest of this Owl, about five miles out of town, which contained four eggs, on 28 May, 1916. It was situated in a thick clump of willows, having been originally built by a crow, and the female sat so close that I almost touched her.

Asio flammeus. SHORT-EARED OWL. Two Short-eared Owls were circling above my house on 16 April, 1915, at a considerable height. I noticed a fair number this season, and at Buffalo Lake picked up a well-fledged youngster on 31 May. In 1916, I noticed a single bird at Camrose on 16 May. It does not appear to be common in the Red Deer district.

Bubo virginianus subarcticus. ARCTIC HORNED OWL. My pair of pet Great Horned Owls were with me at Red Deer and thriving well on hares and raw meat. I took a young friend to a nest in a wood near my house at Alix, and on climbing the tree he reported that the nest contained three eggs and was lined with a few Owls' feathers and some dead leaves of the balm-tree. The birds flew around, uttering many piteous "hoo-hoos." I did not hear the "werk" note, as reported in my notes for last year. We examined this nest on 27 March, 1915.

Surnia ulula caparoch. HAWK-OWL. During 1915 I saw only one specimen, on 24 September, near Alix, hunting for its prey.

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Ceryle alcyon. BELTED KINGFISHER. First observed at Alix on 6 August, 1915. It was generally flushed from below the dam of the village lake. I saw a female, which I believe was the same that nested in the bank of the creek close to my house, sitting on the telegraph-wires in the same locality as late as 9 November, 1916. On 30 June, 1916, I observed a Kingfisher enter its nesting-hole in a bank, almost opposite the tree which the Golden-eye selected for its nest, by the creek near my house. I feel sure the eggs had then hatched.

Dryobates villosus villosus. NORTHERN HAIRY WOOD-PECKER. Fairly numerous in this and the Sylvan Lake district. In the latter I found several nests between 12 and 24 June, all full of young birds.

Dryobates pubescens nelsoni. NELSON'S DOWNY WOOD-PECKER. This species was also nesting in the woods around Sylvan Lake, and was fairly abundant.

Sphyrapicus varius varius. YELLOW-BELLIED SAP-SUCKER. The last of my remaining quartette of Yellow-bellied Sap-Suckers died on 4 February, 1915, as my "Life" food supply became exhausted. During June, however, I got a pair of young, which I presented to the Banff Zoo in August. These birds make delightful pets and, but for occasional fits, do well in captivity. They are common wherever woods exist. I saw the first migrant of the year near my house on 30 April, 1916. I noticed a few pairs at Dried Meat Lake on 18-22 May.

Colaptes auratus luteus. NORTHERN FLICKER. The Northern Flicker is one of the commonest birds in this part of the country. Cook found a nest with seven eggs at Buffalo Lake on 4 June, 1915. Common everywhere. Mr. J. H. Fleming of Toronto writes me regarding two skins of females I sent him :—" Colaptes auratus borealis Ridgway (Boreal Flicker). This is not in the A. O. U Check-list, but if the form is good your bird is it. A male shot on 2 May, 1916, is also borealis."

Tyrannus tyrannus. KINGBIRD. Not common. First migrant of the year reported by Cook on 22 May, at Buffalo Lake.

Sayornis phæbe. Рижве. Earliest appearance at Red Deer 24 April. Common.

Empidonax minimus. LEAST FLY-CATCHER. Common everywhere. I discovered several nests at Sylvan Lake, the first with eggs on 15 June. Earliest record at Buffalo Lake was on 22 May, when a pair was seen by G. Cook.

Pica pica hudsonia. MAGPIE. Three or four were seen near Alix on 9 February, and a pair at Red Deer on 7 November. The Magpie is apparently extending its range.

Cyanocitta cristata cristata. BLUE JAY. Soon after my arrival in Red Deer I saw a Blue Jay close to the house, about 10 October, 1915. On 5 April, 1916, I saw a pair in the spruce-woods about a mile north of the town. A pair nested in my friend Mr. F. C. White's garden, quite close to his house. The young were successfully reared.

Corvus brachyrhynchus hesperis. WESTERN CROW. These pests were observed as early as 20 March, but I saw none myself till the 30th, when one appeared near my house. At Buffalo Lake they were seen on the 27th (Cook).

Molothrus ater ater. COWBIRD. Plentiful. First noted on 16 April, near Alix. I found the Thick-billed Redwinged Starling acting as host to this species on two occasions. By 19 April they were numerous everywhere in the district. In 1916 it was abundant in all districts. At Sylvan Lake I found its eggs in nests of the Claycoloured Sparrow, Olive-backed Thrush, and Philadelphia Vireo.

Agelaius phœniceus fortis. THICK-BILLED RED-WINGED BLACKBIRD. I shot a male of the Thick-billed Red-winged Blackbird at Buffalo Lake on 5 January, 1915, in eclipse plumage. It was feeding on the grain from the pig-troughs,

and appeared to be a solitary specimen, but in spite of the cold and deep snow, was not at all starved. During the nesting-season it is a common sight to see them mobbing the thieving Crows.

Sturnella neglecta. WESTERN MEADOW-LARK. I was a little surprised to find a pair of these birds remaining here (Alix) so late as 2 October, 1915. The earliest note on their arrival that I have is 14 April, when I saw one near the village. In 1916, the latest date on which this species was observed here was 18 September, when one was seen within the town limits. I kept a fledgling alive for a month during the summer and found it a most engaging pet. I knew of three open fields undoubtedly containing nests, but I could not hit on the exact spots. Cook saw five birds at Buffalo Lake on 16 April.

Icterus galbula. BALTIMORE ORIOLE. More abundant than in preceding season. I found a nest close to Cook's house on 26 May, 1915, although building was still in progress. It was suspended in the characteristic way from the top of a thin bough and was very difficult to re-discover when the foliage grew thicker. On 4 June, whilst staying at the head of Buffalo Lake, I noticed another pair gathering nesting materials. I did not find this species so abundant around the town as at the Sylvan Lake, where it nests, although I failed to notice any. Cook reports hearing one sing near his house on 19 May, 1916.

Euphagus carolinus. RUSTY BLACKBIRD. Fairly plentiful everywhere. 1 observed two males at Red Deer on 19 April. On 26 September, 1916, there were about forty birds around my garden, one of which I shot with my .22 pistol. It proved to be a male in winter plumage. I also got a similar specimen on 5 October.

Quiscalus quiscula zneus. BRONZED GRACKLE. I received a skin of the Bronzed Grackle, shot by Cook near his house in August 1915. Two central tail-feathers were white and

somewhat abraded. I saw a small flock near my house on 9 April, 1916, and was much interested in the nuptial display of the males. These spread the breast and back feathers as well as the tail to the fullest extent, dropping the wings low and uttering their curious call-notes at the same time. Cook found a clutch of five eggs at Buffalo Lake on 6 June, and records the species as plentiful.

Hesperiphona vespertina vespertina. EVENING GROSBEAK. At Red Deer on 17 October, 1915, I saw a single Evening Grosbeak feeding on the seeds of maple-trees growing in one of the main streets, also a flock of four on 13 November in same spot. In another of the main streets of the town two males were feeding on Manitoba maple-seeds on 19 January, 1916. I noticed a flock of eight or ten near the river on 11 April, and I saw them for the last time on 6 May.

Pinicola enucleator leucura. ALASKAN PINE GROSBEAK. The Rev. H. M. Holdom informed me that he saw, on 10 & 31 January, 1915, several Pine Grosbeaks at Red Deer and Clive, feeding on maple-berries. Near my house in Alix I saw one specimen on 10 June, and a few close to my new abode on 25 December. I secured a fine male shot near the town on 11 April, 1916. They were not rare during January and February in this district. Mr. J. H. Fleming states that the skin examined by him was probably this species, but the beak was, unfortunately, rather damaged.

Carpodacus purpureus purpureus. PURPLE FINCH. On 6 May I saw three males close to my house and a pair near the mouth of the creek on 30 June.

Acanthis linaria linaria. REDFOLL. Quite plentiful at Red Deer during December 1915. I noticed Redpolls frequently at Alix about the same month in 1916, but overlooked including records in my notes. A small flock visited my garden on 7 September, 1916, and from then onwards they appeared to be fairly common. Astragalinus tristis tristis. PALE GOLDFINCH. Plentiful in the vicinity of the town. I sent a skin to Mr. Fleming, who states it is probably this form.

Plectrophenax nivalis nivalis. SNOW-BUNTING. On 5 February, 1916, a flock, numbering about fifty, appeared in the woods near my house, one male of which I secured with my '22 pistol at long range.

Poccetes gramineus confinis. WESTERN VESPER-SPARROW. Fairly plentiful, but more so at Camrose. Singing lustily on 18 May, 1916.

Passerculus sandwichensis alaudinus. WESTERN SAVANNAH SPARROW. Common.

Zonotrichia albicollis. WHITE-THROATED SPARROW. Plentiful everywhere.

Spizella monticola ochracea. WESTERN TREE-SPARROW. I noticed a small flock around my house on 24 April, 1916, and shot a male on the 28th.

Spizella pallida. CLAY-COLOURED SPARROW. At Sylvan Lake I found two nests containing eggs; to one of these a Cowbird had contributed. Both were well hidden in the long grass near the roadside.

Junco hyemalis hyemalis. SLATE-COLOURED JUNCO. Not rare. I shot a pair not far from the town on 26 April, 1916. One bird was seen at Buffalo Lake on 16 April (Cook).

Melospiza melodia melodia. Song-Sparrow. Abundant everywhere. I found a nest in my back garden holding five well-fledged young, on 12 July, 1916.

Zamelodia Indoviciana. ROSE-BREASTED GROSBEAK. I noticed one male in the woods north of the town, on 24 May, 1916, after which date these birds became common, particularly at Sylvan Lake. At this place I found a nest with four eggs, on 14 June, on which the male was incubating, surrounded with flowers of the clematis, and allowed me to approach very close. I found several more nests later. One on the 18th contained four young, covered with white downy fluff. At Buffalo Lake, Cook observed a pair on 6 June, and states that a few breed in the locality.

Lanius borealis. NORTHERN SHRIKE. More abundant than in the previous season, particularly so near Mirror. Like the Sparrow-Hawks (F. s. sparverius), they like the telegraph-poles and wires from which to survey the surrounding country.

Vireosylvia philadelphia. PHILADELPHIA VIREO. I found a nest at Sylvan Lake on 18 June, 1916, containing four eggs, which I believe to belong to this species. It was suspended from the slender branch of a small bush not more than four feet above the ground. Three eggs of the Cowbird crowded the structure to its fullest capacity.

Dendroica æstiva æstiva. YELLOW WARBLER. One of the commonest members of this family. I found three nests on 13 June, 1916, at Sylvan Lake, one with five eggs and the others unfinished. Later on I found more nests, the birds being particularly fussy when I approached near them. They were usually built at about four to five feet above the ground, though a few were even twelve to fifteen, but the site was then against the trunk of a fair-sized poplar-tree. Some of these nests held small young about the 15th of the same month.

Dendroica coronata. MYRTLE WARBLER. A few pairs frequented the woods around my dwelling in early May. On 29 April, 1916, several were seen by Mrs. Cassels near the town, and Cook (Buffalo Lake) noticed one on 15 May.

Piranga Indoviciana. WESTERN TANAGER. Fairly rare. I saw several in the woods around my house on 29 May, 1916, and at Sylvan Lake found a nest on 14 June. This was placed amongst the slenderest branches of a young and thin poplar-tree, about forty feet from the ground, and quite impossible to investigate. Another nest close by was either an old one or else deserted, but was only about twenty feet above the lake-side. At the best of times, the structure is

a very fragile one. Mrs. Cassels, a very keen observer of birds, informs me that her earliest date for Red Deer was 18 May, and for Sylvan Lake 6 June, when she noticed one building.

Progne subis subis. PURPLE MARTIN. Between Mirror and Buffalo Lake, I saw a pair of these birds on 30 May, 1915. They do not appear to be common. In 1916, I saw one near the town on 1 May. A few pairs built in the rotten stumps left standing after a bush-fire, along the banks of the lake and a little inland at Sylvan Lake. At this place I examined a nesting-site and took out a single egg on 23 June. One or two small fresh leaves were utilized as a lining.

Petrochelidon lunifrons lunifrons. CLIFF-Swallow. 23 July, 1916, was the last date on which I saw this species. Two birds were flying around the neighbourhood of my house. Not plentiful.

Iridoprogne bicolor. TREE-SWALLOW. Fairly numerous. I found them nesting under the same conditions as the Purple Martins, and both species, where possible, were using the same stump. At Dried Meat Lake they were beginning to build on 20 May, 1916. About a dozen were first observed, near my house, on 9 May, and by Cook at Buffalo Lake on the 8th.

Riparia riparia. BANK SWALLOW. A small colony nested in the river-bank near my house. At Buffalo Lake they arrived on 22 May, 1916 (Cook).

Bombycilla garrula. BOHEMIAN WAXWING. During the summer this species was common throughout the Alix district. My first notes record five, seen near my house on 22 June, 1915. I observed a flock of about twenty birds in the woods north of the town on 5 April, 1916. They were busily hawking flies and were rather shy; their manner of hunting insects reminded me greatly of the European Beeeater (*Merops apiaster*) I saw in such large numbers in

Cyprus. I shot a fine male on the 19th, and Cook states that he saw seven birds on 16 February at Buffalo Lake.

Bombycilla cedrorum. CEDAR WAXWING. A pair first observed on 6 June, 1916, near my house. On the 19th I noticed one carrying nesting materials. On 8 August I saw eight flying south-east over the town. Not very abundant.

Anthus sp? PIPIT. On the banks of the river I observed a flock of about eight or ten Pipits, not tame enough to approach very closely, on 4 October, 1916.

Dumetella carolinensis. CATBIRD. Although I strongly suspected the presence of this bird at Alix in 1914, I could not be certain of its identity, but at Red Deer I saw three, at close view, on 28 July, 1915.

Troglodytes aëdon parkmani. WESTERN HOUSE-WREN. Fairly abundant. I found a nest at Sylvan Lake on 15 June, 1916, containing seven eggs; the bird had used an old nesting-site of the Downy Woodpecker. At Red Deer a pair successfully reared their brood in a ginger-jar slung in a small tree, close to Mr. C. F. White's porch. Cook heard one singing on 26 May.

Sitta canadensis. RED-BREASTED NUTHATCH. This species during May 1916 was fairly numerous in the woods surrounding the town. I saw the first specimen on 26 April, but not many at Sylvan Lake. Mrs. Cassels reported a pair in her garden at Red Deer on 18 April, worrying some Chickadees.

Hylocichla ustulata swainsoni. OLIVE-BACKED THRUSH. A few birds were seen during early May in 1915 in the woods around the town, all very shy. At Sylvan Lake on the 14th, I discovered a nest in the woods containing four eggs, with two Cowbird's. On the following day another with three eggs and one Cowbird's, and two empty nests. I had the same luck on the 17th, and on the 19th found a nest with three newly hatched young along with a fresh egg

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of the other species under them. On 26 June I found the last one of the season, as far as my searching went, which held three eggs and one young. This was about a quarter of a mile from my house in the woods. All these nests were built within six feet of the ground, with one exception, situated about ten feet up in the branches of a small poplar.

Planesticus migratorius propinquus. WESTERN ROBIN. Near Alix, on 23 April, 1915, I noticed a Robin with a pure white head, also several primaries of the same colour. Nesting began about 19 May, on which date, in this locality, I found eggs but no full clutches. I have managed to rear a young bird, now successfully moulted, which, as my wife remarks, "always starts to sing in unison with the kettle." One specimen reported near the town on 2 April, 1916, and I saw one on the 7th. Plentiful everywhere. At Dried Meat Lake I observed a nest with four eggs, neatly concealed in the hollow at the top of a dead tree-stump, on 21 May.

Sialia currucoides. MOUNTAIN BLUEBIRD. Decidedly more abundant than in 1914. A pair appeared in the town on 22 March, and later became common. I did not observe any at Sylvan Lake. In 1916, small flocks of adults and young were daily to be seen in the town up to 20 September, on which date my notes record two.

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GIACINTO MARTORELLI.

As was briefly mentioned in 'The Ibis' for April, Prof. Martorelli, of the Civic Museum at Milan, and a Foreign Member of the B.O.U. since 1903, died at Milan on 11 December, 1917.

Born at Turin on 1 October, 1855, Martorelli was educated at the University of his birthplace, obtaining a doctoriate in Natural Science in 1879 for a dissertation